

DevOpsDAY-5

deployment.yml

```
apiVersion:apps/v1
kind: Deployment
metadata:
  name: my-deploy
  namespace:my-bank
  labels:
    name:my-deploy
spec:
  replicas:1
  selector:
    matchLabels:
      apptype:web-backend
  strategy:
    type:RollingUpdate
  template:
    metadata:
      labels:
        apptype:web-backend
    spec:
      containers:
        -name:my-web
          image:22cs1258/mysimplewebapplication:tagname
          ports:
            -containerPort:9001

---

apiVersion:v1
kind: Service
metadata:
  name: my-service
  namespace:my-bank
  labels:
    app:my-service
spec:
  type:NodePort
  ports:
    -port:9001
      targetPort:8080
```

nodePort:30007
selector:
apptype:web-backend

Minikube

```
Select navin@ITP-CC16-42:~$
[INFO] plugin/kubernetes: Trace[855174029]: "Reflector ListAndWatch" name:pkg/mod/k8s.io/client-go@v0.29.3/tools/cache/reflector.go:229 (21-Mar-2025 05:26:15.517) (total time: 30000ms):
Trace[855174029]: ---"Objects listed" error:Get "https://10.96.0.1:443/apis/discovery.k8s.io/v1/endpointslices?limit=500&resourceVersion=0": dial tcp 10.96.0.1:443: i/o timeout 30000ms (05:26:45.517)
Trace[855174029]: [30.00045988s] [30.00045988s] END
[ERROR] plugin/kubernetes: pkg/mod/k8s.io/client-go@v0.29.3/tools/cache/reflector.go:229: Failed to watch "v1.Endpointslice: failed to list "v1.Endpointslice: Get "https://10.96.0.1:443/apis/discovery.k8s.io/v1/endpointslices?limit=500&resourceVersion=0": dial tcp 10.96.0.1:443: i/o timeout
[INFO] plugin/kubernetes: pkg/mod/k8s.io/client-go@v0.29.3/tools/cache/reflector.go:229: failed to list "v1.Namespace: Get "https://10.96.0.1:443/api/v1/namespaces?limit=500&resourceVersion=0": dial tcp 10.96.0.1:443: i/o timeout
[INFO] plugin/kubernetes: Trace[258437978]: "Reflector ListAndWatch" name:pkg/mod/k8s.io/client-go@v0.29.3/tools/cache/reflector.go:229 (21-Mar-2025 05:26:15.516) (total time: 30000ms):
Trace[258437978]: ---"Objects listed" error:Get "https://10.96.0.1:443/api/v1/namespaces?limit=500&resourceVersion=0": dial tcp 10.96.0.1:443: i/o timeout 30000ms (05:26:45.517)
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[INFO] plugin/kubernetes: Trace[2090896627]: "Reflector ListAndWatch" name:pkg/mod/k8s.io/client-go@v0.29.3/tools/cache/reflector.go:229 (21-Mar-2025 05:26:15.516) (total time: 30000ms):
Trace[2090896627]: ---"Objects listed" error:Get "https://10.96.0.1:443/api/v1/services?limit=500&resourceVersion=0": dial tcp 10.96.0.1:443: i/o timeout 30000ms (05:26:45.517)
Trace[2090896627]: [30.001063121s] [30.001063121s] END
[ERROR] plugin/kubernetes: pkg/mod/k8s.io/client-go@v0.29.3/tools/cache/reflector.go:229: Failed to watch "v1.Service: failed to list "v1.Service: Get "https://10.96.0.1:443/api/v1/services?limit=500&resourceVersion=0": dial tcp 10.96.0.1:443: i/o timeout
navin@ITP-CC16-42:~$ kubectl describe pod coredns-668dbf9bc-dcw4v -n kube-system
Name:               coredns-668dbf9bc-dcw4v
Namespace:          kube-system
Priority:             2000000000
Priority Class Name:  system-cluster-critical
Service Account:     coredns
Node:                minikube/192.168.49.2
Start Time:          Fri, 21 Mar 2025 05:26:14 +0000
Labels:              k8s-app=kube-dns
                    pod-template-hash=668dbf9bc
Annotations:         <none>
Status:              Running
IP:                  10.244.0.2
IPs:
  IP:                10.244.0.2
Controlled By:       ReplicaSet/coredns-668dbf9bc
Containers:
  coredns:
    Container ID:   docker://9b2d86ad235fcdab875f9cf0a7821f002f6c3bd3e41f7c4327c6b7f89cf411e0
    Image:          registry.k8s.io/coredns/coredns:v1.11.2
    Image ID:       docker-pullable://registry.k8s.io/coredns/coredns@sha256:9caabfb6238b189a65d8d6e6ac138de60d6a1c19e5a341fbb7c78382559c6e
    Ports:          53/UDP, 53/TCP, 9153/TCP
    Host Ports:     0/UDP, 0/TCP, 0/TCP
    Args:
      -conf
      /etc/coredns/Corefile
    State:          Running
      Started:      Fri, 21 Mar 2025 05:26:15 +0000
    Ready:          True
    Restart Count:  0
    Limits:
      Memory: 170Mi
    Requests:
navin@ITP-CC16-42:~$ sudo apt update
[sudo] password for navin:
Ign:1 https://pkg.jenkins.io/debian binary/ InRelease
Hit:2 https://pkg.jenkins.io/debian binary/ Release
Hit:4 http://archive.ubuntu.com/ubuntu noble InRelease
Hit:5 http://security.ubuntu.com/ubuntu noble-security InRelease
Hit:6 http://archive.ubuntu.com/ubuntu noble-updates InRelease
Hit:7 http://archive.ubuntu.com/ubuntu noble-backports InRelease
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
1 package can be upgraded. Run 'apt list --upgradable' to see it.
navin@ITP-CC16-42:~$ LS0tLS1CRUdJTiBDRVJUSUZJQ0FURSB0tLS0tck1JSURCaKNDQWU2Z0F3SUJlZ0tCQVRBTKJnaFoa2lHOXcxQkFRc0ZBRFBFTVJNd0VRWURWUVRERXdwGdFHNXAKYTNWAvPvTKJNQjRYRFRJMU1ETXhPREeE56QTVNakFS8tKwDZURVRNkVhQVFRQ0BeE1LYldsdmFkDFZbZVZUVRDQ0FTSXdEUVlKS29aSWh2O5BUUUVQ1FBRGdnRVRBRENDQVvQ2dnRjU3BTmpuCdweGhwMU2Sks0RX1JWEMWlZiQXRTUDZxV1Pf4wZ0L1VDVfV1ZVZc01TTnBNcS8KwJzqME1nWE1hY1NLU0JTZTZzW01sdGFBNDI0NkU4cGhX1jNkamfOKytvUTRob3dCK1dVSXJVa2JNT3RtZnM2SgpyZUhYUUNoSGRDV1Z4VG5JVCtQ5XRzQ2tJUFJ2SKFtU0ZFURx1n1SSmk4b1Z6OEZnN2ZpeUxC5zk5YU3L2Z5vz1JSTEzM2J1jEhMHMK500MLw0Uxag1nc202azRkRzZlBlIyRmFS50F1M1FqY21HZu4KvNBxH3hGVCs3cjYrREdEcmh6HdpTEH5N31HSHNIZUMvV2lnb3dUN316UDc1c3ZueSt2caYxeE1rQXpx1ytEMQpnMmNFHhB2VvyekGtUYAdRnRURWUjBQ0VF1L0B0UR8Z0tFTUIR0EXVRKUVFCK1CUUd0Q3NHQVFRK3JTLUNC22yQcmFRK3JRYRBEVEFQcm0VkhSTU0BZJhF01RBRFRS9Nq0JBH0TFVZERNUVCKQJ3TN282511SaWxU05NbjdxBEtES010aC5Qy9eUX0CUPQ0FRURFnekplZzJH0Ap1H0tY1NlUUVu0GplZFzFhV531uG0VR0VQ0N0UWE3V0F1VG03VjVjNEduU0E9dmddNtALeURKRVZScM0OUPvd0T0deE11aZRMUR0a3N10zFJd5Juc1FLUS0R929vz290TFhWkF1UtdvneKUZd0Wk4yThw2Z1htHwY7Jtdw4Z2pk0BVb11v0EK2e1FwMeXckp1STYvMk3yJt1qbm1Q1ZRT21kYTFH5mfjWw020CcxMXTwbjTtd0FBMFZ0TNRcTAXaw1tCv11NHFKUIRJTX1kXhZU0Zj0EdEuaN2a3U00Y4202a3N1TW1hGdtQ1VvMm0vRhwMzFzcR0N3dVcGJ21Tj35i9G0uX0Nz2aXJEN1J0KysyVjZ4d1UkefndVh0pMwJrSng0BwC9PQ0tLS0tLVUORC0DRVRJUSUZJQ0FURSB0tLS0tCg==
navin@ITP-CC16-42:~$ /home/navin/.minikube/profiles/minikube/client.crt
-bash: /home/navin/.minikube/profiles/minikube/client.crt: Permission denied
navin@ITP-CC16-42:~$ /home/navin/.minikube/profiles/minikube
-bash: /home/navin/.minikube/profiles/minikube: Is a directory
navin@ITP-CC16-42:~$
```



```
navin@ITP-CC16-42:~/k8s$ kubectl get node
NAME          STATUS    ROLES    AGE   VERSION
minikube      Ready     control-plane  3h49m  v1.32.0
navin@ITP-CC16-42:~/k8s$
```

Pipelinescript-jenkins

JAVAApplication

```
pipeline {
    agent any

    stages {
        stage('scm'){
            steps{
                gitbranch:" https://github.com/NavinkumarD/Guvi-Tasks-DevOps.git"
            }
        }

        stage('builb-clean'){
            steps {
                sh"mvn clean"
            }
        }

        stage('build-validate'){
            steps {
                sh"mvn validate"
            }
        }

        stage('build-com'){
            steps {
                sh"mvn compile"
            }
        }
    }
}
```

```

stage('build-test'){
    steps {
        sh"mvn test"
    }
}

stage('build-install'){
    steps {
        sh"mvn package"
    }
}

stage('buildtoimages'){
    steps {
        script{
            sh'docker build-t.'
        }
    }
}

stage('pushtohub'){ steps
    {
        script{
            withDockerRegistry(credentialsId:'Docker_cred',url:'https://index.docker.io/v1/'){ sh
                'docker push '
            }
        }
    }
}

```

```

}

stage('DeployApp'){
    steps {
        withKubeConfig(caCertificate:"",clusterName:'minikube',contextName:'minikube',
credentialsId:'mukubeconfig_011',namespace:"",restrictKubeConfigAccess:false,serverUrl:
'https://192.168.49.2:8443') {
            sh'kubectl apply -f deployment.yml --validate=false'
        }
    }
}

stage('Test'){
    steps {
        withKubeConfig(caCertificate: "", clusterName: 'minikube', contextName: 'minikube',
credentialsId:'mukubeconfig_011',namespace:"",restrictKubeConfigAccess:false,serverUrl:
'https://192.168.49.2:8443') {

            sh'minikube service my-service --url | xargs curl'

        }
    }
}

```


Dashboard > java application >

Status

Changes

Build Now

Configure

Delete Pipeline

Full Stage View

Stages

Rename

Pipeline Syntax

Builds

Filter

Today

#15 10:32 AM

#14 10:30 AM

#13 10:29 AM

#11 10:02 AM

java application

Add description

Stage View

Average stage times:
(full run time: ~20s)

	SCM	Build	Build Docker Image	Push Docker Image	test
#15	711ms	1s	310ms	14s	
#14	746ms	1s	313ms	16s	392ms failed
#13	1s	1s	563ms	17s	1s failed
#11	724ms	1s	299ms	14s	
#10	1s	1s	305ms	22s	

java application #11 Console - x

Docker Hub

Personal access tokens | Docker

localhost:8080/job/java%20application/11/console

WARNING: Your password will be stored unencrypted in /var/lib/jenkins/workspace/java_application@9ff278c-1258-4b77-8b43-d85d82b1188/config.xml.
Configure a credential helper to remove this warning. See
<https://docs.docker.com/engine/reference/commandline/login/#credentials-store>

Login Succeeded

[Pipeline] {

[Pipeline] sh

+ docker push 22cs1258/mysimplewebApplication

Using default tag: latest

The push refers to repository [docker.io/22cs1258/mysimplewebApplication]

baad0928804: Preparing

5f70bf18a086: Preparing

43c9fa18061: Preparing

5f70bf18a086: Preparing

bc85267c13b: Preparing

4a955ab7345: Preparing

39c4ba89a5a: Preparing

f844dcf94808: Preparing

3359bc3d7ada: Preparing

4b7c8ae0934: Preparing

f844dcf94808: Waiting

39c4ba89a5a: Waiting

4b7c8ae0934: Waiting

3359bc3d7ada: Waiting

bc85267c13b: Layer already exists

5f70bf18a086: Layer already exists

43c9fa18061: Layer already exists

4a955ab7345: Layer already exists

39c4ba89a5a: Layer already exists

3359bc3d7ada: Layer already exists

f844dcf94808: Layer already exists

4b7c8ae0934: Layer already exists

baad0928804: Pushed

latest: digest: sha256:95be5478167852192541da8177d1f62a782a2ab1c8bdc188967188564387ef5 size: 2489

[Pipeline] }

[Pipeline] // withDockerRegistry

[Pipeline] }

[Pipeline] // script

[Pipeline] }

[Pipeline] // stage

[Pipeline] }

[Pipeline] // node

[Pipeline] End of Pipeline

Finished: SUCCESS

35°C Mostly sunny

Search

ENG IN

16:04 21-03-2025

34°C Mostly sunny

Search

ENG IN

15:35 21-03-2025

java application #11 Console

Docker Hub

Personal access tokens | Docker

+

localhost:8080/job/java%20application/11/console

Jenkins

Navin Kumar D

log out

Dashboard > java application > #11

Status

Changes

Console Output

Edit Build Information

Timings

Git Build Data

Pipeline Overview

Pipeline Console

Thread Dump

Pause/resume

Replay

Pipeline Steps

Workspaces

Previous Build

Console Output

Download

Copy

View as plain text

Started by user Navin Kumar D

[Pipeline] Start of Pipeline

[Pipeline] node

Running on Jenkins in /var/lib/jenkins/workspace/java application

[Pipeline] {

[Pipeline] stage

[Pipeline] { (SCH)

[Pipeline] git

The recommended git tool is: NONE

No credentials specified

> git rev-parse --resolve-git-dir /var/lib/jenkins/workspace/java application/.git # timeout=10

Fetching changes from the remote Git repository

> git config remote.origin.url https://github.com/NavinkumarD/Guvitasks.git # timeout=10

Fetching upstream changes from https://github.com/NavinkumarD/Guvitasks.git

> git --version # timeout=10

> git --version # 'git version 2.43.0'

> git fetch --tags --force --progress -- https://github.com/NavinkumarD/Guvitasks.git +refs/heads/*:refs/remotes/origin/* # timeout=10

> git rev-parse refs/remotes/origin/main^{commit} # timeout=10

Checking out Revision 5804759c8acd532c7246d816470a7e863e716df (refs/remotes/origin/main)

> git config core.sparsecheckout # timeout=10

> git checkout -f 5804759c8acd532c7246d816470a7e863e716df # timeout=10

> git branch -a -v --no-abbrev # timeout=10

> git branch -D main # timeout=10

> git checkout -b main 5804759c8acd532c7246d816470a7e863e716df # timeout=10

Commit message: "jenkinsfile"

> git rev-list --no-walk 5804759c8acd532c7246d816470a7e863e716df # timeout=10

[Pipeline] }

[Pipeline] // stage

34°C

Mostly sunny

Search

ENG IN

15:33

21-03-2025